

REMARKS

Reconsideration of the application is requested in view of the amendments to the specification and the claims and the remarks presented herein.

The claims in the application are claims 1 to 6, the only claims presented.

The specification has been amended to refer to Figs. 1a to 1d and use the correct translation of “fully, thoroughly hardened” rather than – fully hardened – in the specification and claims. Moreover, new drawings are submitted with 1a and 1c being indicated as prior art.

Claims 1 to 6 have been rejected under 35 USC 103 as being obvious over the Grell et al patent which the Examiner states “discloses a thin-walled needle bearing, produced without removal of material, the outer ring produced from a cold-rolled strip, wherein the outer ring is produced from a cold-formable, fully hardenable steel, and the fully hardened wall having a core hardness of ≥ 600 HV and a surface hardness of ≥ 680 HV. With respect to the limitation of a ratio of from 1:20 to 1:5 being set between their wall thickness and the diameter of the bearing needles, as this ratio is dependent on the relative size of the rolling elements, this is seen to be a matter of routine design optimization to one of ordinary skill in the art”.

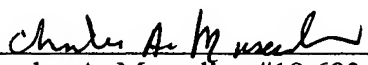
Applicants traverse this ground of rejection as the amended claims are believed to distinguish the invention from the Grell et al patent. The term “fully hardened” does not clearly express a crucial feature of the invention. To be more precise, “fully hardened” should rather be translated with “thoroughly hardened” referring to the circumstance that the steel is

fully hardened **in respect to its thickness**, in particular towards and at the steel core (not only hardened at the surfaces). A better understanding of “thoroughly hardened” can be obtained from Fig. 2 including the corresponding description.

The disclosure supports the new terminology in lines 20 to 26 of page 10 and this hardness profile is not disclosed in the Grell et al patent or any of the other cited art. In the invention a smaller thickness of the outer rings of a thin-walled bearing or of the cylindrical part of a universal joint bush has become possible according to the invention if a nearly uniform hardness profile is employed. Before, it was only possible to rely on the hardened parts that were located very close to the surface, whereas other less hardened or not hardened sections below the surfaces did not contribute much to the stability of the steel structure. Once a thoroughly hardened steel is used, the overall thickness can be saved reduced and building space can be gained, for instance, to use bigger sized rolling elements. Therefore, Grell et al does not teach Applicants’ invention and withdrawal of this rejection is requested.

In view of the amendments to the specification and claims, it is believed that the claims point out Applicants’ invention. Therefore, favorable reconsideration of the application is requested.

Respectfully submitted,


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Enclosures